Drought Information Statement

WFO Little Rock, AR

Issued: September 30, 2011

Synopsis

An exceptional drought continued in southwest Arkansas to end September.

Drought Monitor

The U.S. Drought Monitor is available online at **http://www.drought.unl.edu/dm**. It is a collaborative effort between several government and academic partners. The U.S. Drought Monitor is issued each Thursday morning and takes into account hydro-meteorological data through 7 AM Tuesday. There are four levels of drought: D1 (moderate), D2 (severe), D3 (extreme), and D4 (exceptional).

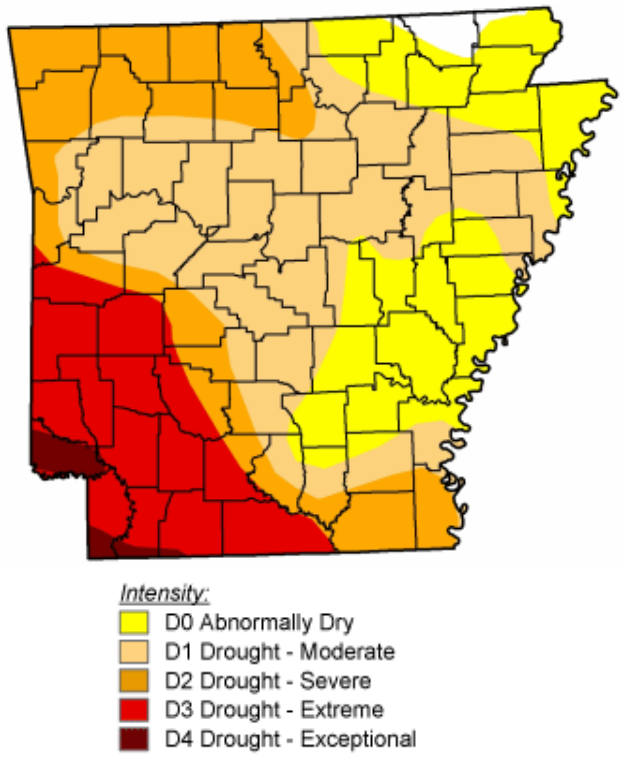

Figure 1 – U.S. Drought Monitor for September 27, 2011.

The latest U.S. Drought Monitor (Figure 1), issued September 27, 2011, indicated D2 to D4 conditions mainly in southern and western Arkansas. This included areas south and west of Booneville (Logan County), Malvern (Hot Spring County), Hampton (Calhoun County) and McGehee (Desha County). Parts of the northwest also had D2 conditions. Widespread D0/D1 conditions were noted in much of the remainder of the state.

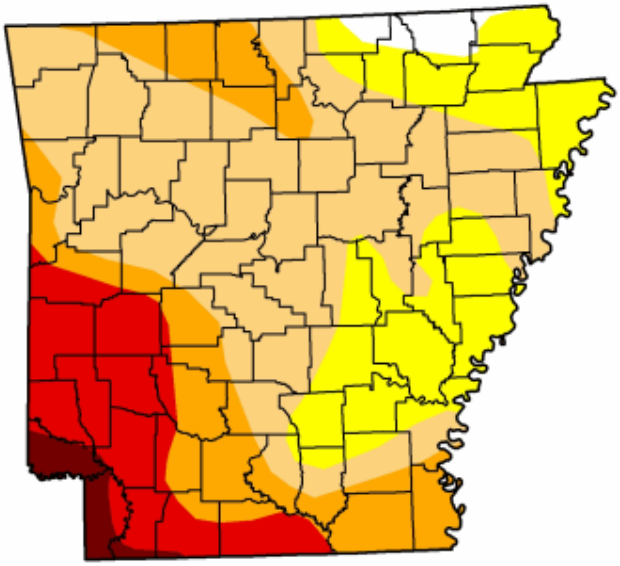

Figure 2 – Same as Figure 1, but issued August 30, 2011.

Climate Data and Analysis

In 2010, southern and eastern sections of the state experienced well below normal rainfall (Figure 3). Rainfall deficits were more than 17 inches in some areas. In the far southeast, rainfall was as little as 25 to 50 percent of normal.

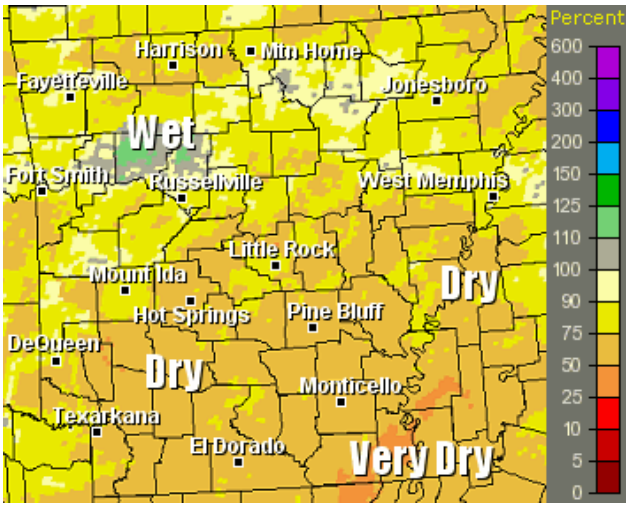

Figure 3 – Percent of normal rainfall in 2010.

Precipitation in 2010

Site	Amount	+/-	% of Normal
Fayetteville (NW AR)	*42.15*	*-3.87*	*92%*
Harrison (NC AR)	*46.12*	*+0.92*	*102%*
Jonesboro (NE AR)	*32.22*	*-13.96*	*70%*
Fort Smith (WC AR)	*35.27*	*-8.60*	*80%*
Little Rock (C AR)	*36.52*	*-14.41*	*72%*
W Memphis (EC AR)	*51.83*	*-0.97*	*98%*
Texarkana (SW AR)	*29.53*	*-17.85*	*62%*
El Dorado (SC AR)	*34.23*	*-19.88*	*63%*
Pine Bluff (SE AR)	*31.97*	*-20.51*	*61%*

Rainfall through September, 2011 suggested the situation was becoming as dire as a year ago in the southwest. Totals were at/above normal in the north/east.

Precipitation in 2011 (thru September)

Site	Amount	+/-	% of Normal
Fayetteville (NW AR)	*41.99*	*+7.79*	*123%*
Harrison (NC AR)	*40.10*	*+6.94*	*121%*
Jonesboro (NE AR)	*37.27*	*+3.10*	*109%*
Fort Smith (WC AR)	*32.21*	*-1.20*	*96%*
Little Rock (C AR)	*35.65*	*+1.06*	*103%*
W Memphis (EC AR)	*37.02*	*-0.82*	*98%*
Texarkana (SW AR)	*21.04*	*-13.81*	*60%*
El Dorado (SC AR)	*23.27*	*-14.39*	*62%*
Pine Bluff (SE AR)	*30.54*	*-5.34*	*85%*

It was hoped that the tropics would contribute more precipitation this year. In early September, the remnants of Tropical Storm Lee came close, but missed the region to the southeast (Figure 4).

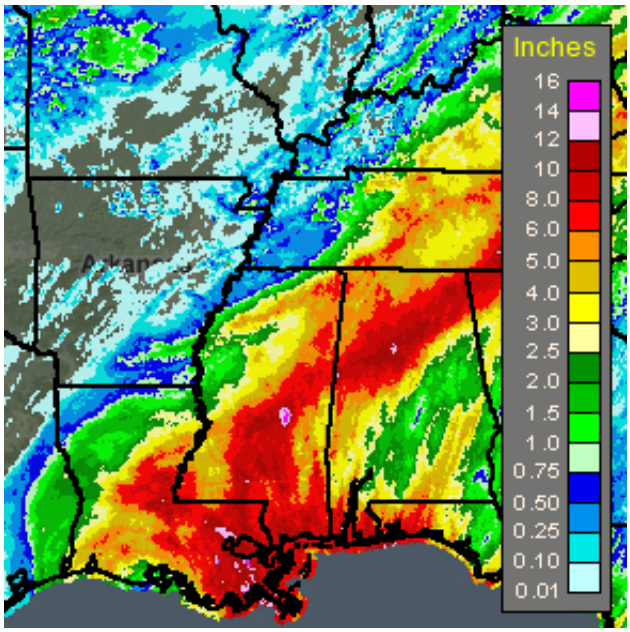

Figure 4 – One hundred twenty hour (five day) rainfall through 100 am CDT on 09/07/2011. The remnants of Tropical Storm Lee produced flooding rain across the southeast United States, the Tennessee Valley and the central Appalachians.

Beneficial rain in September was mostly confined to areas near the Missouri border. Even so, rain was in the minus category across much of Arkansas.

Precipitation in September, 2011

Site	Amount	+/-	% of Normal
Fayetteville (NW AR)	*3.63*	*-1.01*	*78%*
Harrison (NC AR)	*3.58*	*-0.62*	*85%*
Jonesboro (NE AR)	*2.80*	*-0.26*	*92%*
Fort Smith (WC AR)	*1.47*	*-2.58*	*36%*
Little Rock (C AR)	*1.17*	*-2.01*	*37%*
W Memphis (EC AR)	*1.55*	*-1.29*	*55%*
Texarkana (SW AR)	*2.23*	*-1.20*	*65%*
El Dorado (SC AR)	*1.19*	*-1.92*	*38%*
Pine Bluff (SE AR)	*0.84*	*-1.85*	*31%*

Soil Moisture/Hydrology

Yearly rainfall totals in the north/east were positive, and this was reflected along area tributaries by inflated water levels. Reservoirs in the north (and in southern Missouri) were at least 95 percent of capacity. This included Beaver, Bull Shoals, Norfork and Table Rock Lakes. The south/west had lackluster streamflow values (Figure 5).

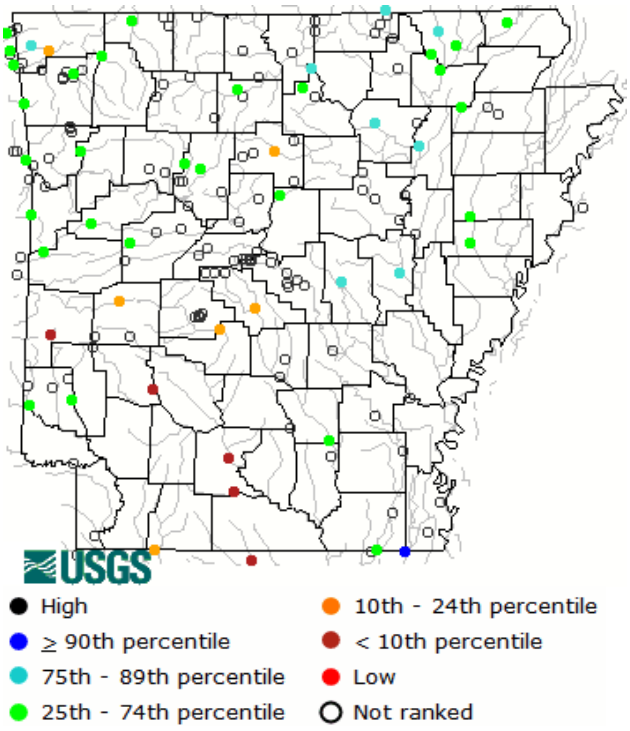

Figure 5 – At or below normal streamflow (the 25th to 74th percentile or less) was confined to southwest Arkansas on September 30, 2011 (source: USGS).

Soil moisture followed streamflow trends (Figure 6). Ground water was least available in the south/west, with empty stock ponds indicating a continuing drought.

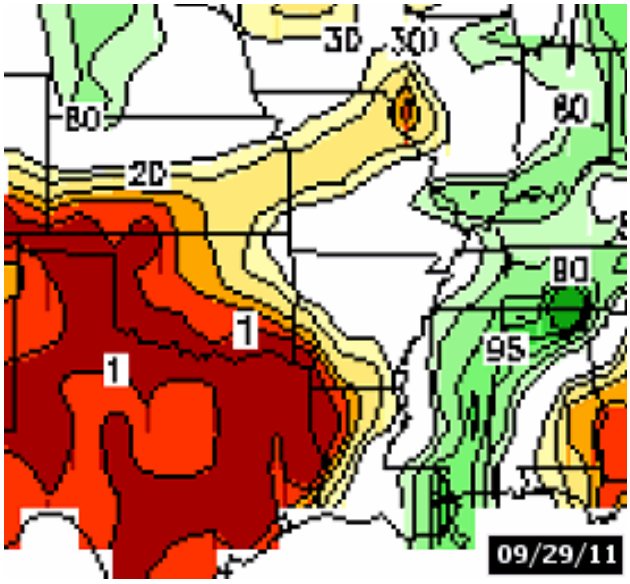

Figure 6 – Soil moisture was near normal in much of Arkansas except the southwest as of September 29, 2011. Values from 30 to 70 percent are considered normal.

A long period of subpar rain in the southwest and an ample supply of heat this summer stressed vegetation, and plants dried out. This increased the wildfire concern (Figure 7).

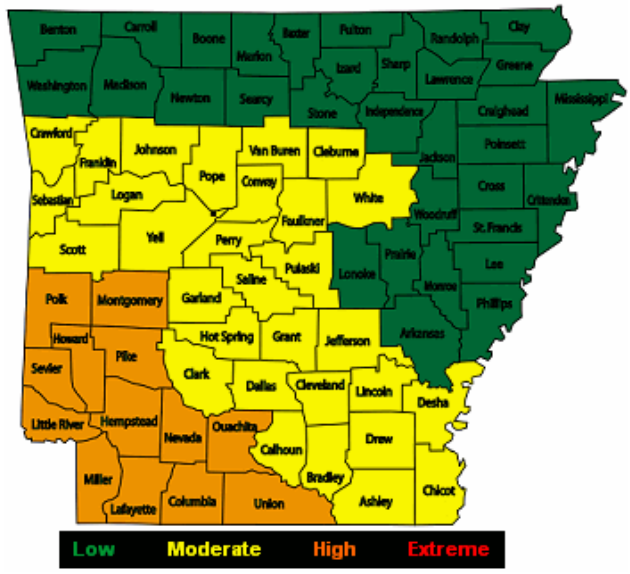

Figure 7 – A high fire danger was noted in southwest Arkansas on September 30, 2011 (source: Arkansas Forestry Commission).

There was a high fire danger in the southwest counties, and several of these counties were under burn bans as of September 30th.

Forecast

Looking ahead, La Niña conditions (i.e. cooler than normal water in the equatorial Pacific Ocean) will likely develop in the fall and winter months. This usually results in below normal precipitation from the southern Plains into areas along the Gulf Coast.

As the tropical season winds down, drought conditions could expand and possibly worsen across the region (Figure 8). The potential for a worsening drought will be greatest in the southern counties where precipitation deficits are already high.

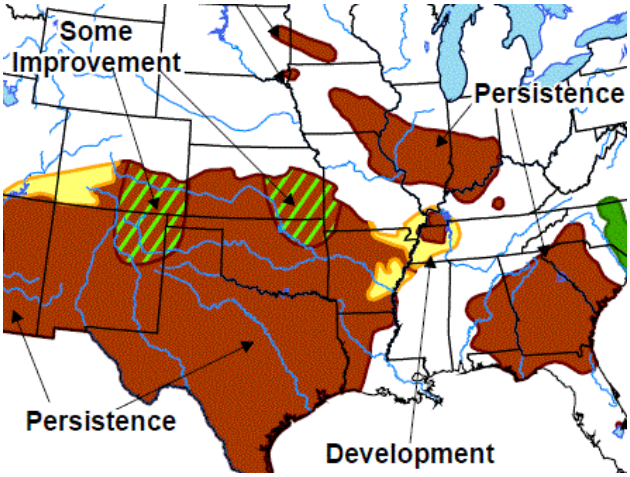

Figure 8 – The Drought Outlook through December, 2011 (source: Climate Prediction Center).

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Next Update: November 4, 2011